activity it is internalized in one of two manners. If an individual develops harmonious passion, the activity is aligned with other aspects of their life and is well-integrated into their identity. Conversely, if obsessive passion develops, the activity takes a disproportionate percentage of an individual's identity and may cause conflict with other life domains. Research has supported this model and shown that, typically, harmonious passion leads to more positive outcomes than obsessive passion. Even though research has supported the dualistic model, relatively few studies have investigated which constructs are related to sport passion, particularly in youth athletes. One construct that may influence the type of passion youth develop is parental feedback. Specifically, whether youth perceive parental feedback as supportive or as increased pressure could influence whether harmonious or obsessive passion develops for sport. Therefore, the purpose of the current study was to investigate the relationship between youth passion and youth perceptions of parental support and pressure. Ninety-five youth completed the passion scale and a survey assessing perceptions of parental support and pressure for both their father and mother, with 11 participants indicating no sport participation outside of summer camps. Analyses of the 84 youth athletes who participated in sport outside of camps indicated a high level of general passion for their sport. Additionally, youth scored high on harmonious passion (M = 5.09), moderate on obsessive passion (M = 3.15), and perceived high levels of support and moderate levels of pressure from both their father and mother. Finally, parental support from both mother and father strongly correlated to harmonious passion while perceived pressure from the father positively correlated to obsessive passion. Discussion will center on general application and future directions.

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Does recess quality matter? Differences in physical activity, student engagement, and student perceptions

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Over the past decade, considerable attention has been focused on the implications school-based recess may have on child development. As recess remains a topic of conversation in policy decisions, there is a need to consider the quality of this environment. The purpose of the current study was to examine differences in high and low quality recess periods. Group level data were collected during 61 recess periods across 13 urban schools. Physical activity (PA) data were collected using the Fitbit Flex, a wrist-worn accelerometer, during 57 of the 61 recess periods and included 3,985 students. Engagement in various types of games and play activities was coded using the Activities of Daily Living – Playground Play at 60 of the 61 recess periods and included 4,435 students. Psychological need satisfaction in recess PA surveys were administered to 820 4th and 5th grade students. The Great Recess Framework - Observational Tool (GRF-OT), a tool that measures safety and structure, adult engagement and supervision, student behaviors, and transitions at recess was used to assess the quality of recess. Recess session with a score greater than the sample median were classified as high quality recess session. Data showed that students in a high quality recess were significantly more likely to engage in light PA (37% vs 33%; $p = .039$), significantly more likely to be engaged in playground activities (74% vs 59%; $p < .001$), and reported feeling significantly more safe ($p < .001$) than students in a low quality recess. A trend towards lower levels of sedentary activity in a high quality recess were found when compared to a low quality recess (13% vs 17%; $p = .078$), which was more pronounced in female students (14% vs 19%; $p = .045$). No differences were found in levels of moderate-to-vigorous PA or psychological need satisfaction. Findings from the current study suggest a high quality recess is an important facet to consider in order to facilitate desired outcomes, and should be considered when planning and evaluating school-based recess.

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Examining the relationship between falls self-efficacy and postural sway in community-dwelling older adults

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The most common cause for both fatal and nonfatal injuries in older adults is experiencing a fall. Identifying variables that may help predict a person's likelihood of falling is essential towards informing fall prevention interventions. There are two independent approaches, psychosocial and biophysical, that examine fall predictors and outcomes. Psychosocial approach focuses on mental states, such as fall self-efficacy, a person's confidence in their ability to perform activities of daily living without falling, as a fall predictor. Whereas the biophysical approach focuses on physical performance, e.g. postural sway, generally quantified by deviations from a person's center of pressure while standing in a static posture. Previous research has explored the relationship between fall predictors on fall outcomes but rarely explores the relationship two predictors have on one another and how, together, these predictors influence falls risk. The purpose of this study was to examine the relationship between common fall predictors, fall self-efficacy and postural sway, in community-dwelling aging adults to further understand fall risk assessment. Ambulatory, community-dwelling adults (n = 107, mean age 73.8, + 7.95, female=80) were recruited from senior centers across San Diego County. The Modified Falls Efficacy Scale was used to measure fall self-efficacy and the BTrackS balance assessment system was used to measure postural sway in both an eyes open and eyes closed condition. A moderate negative correlation was found between falls self-efficacy and eyes open postural sway ($r = -.403$, $p < .001$.), indicating that as a person's self-efficacy score increases, their sway decreases. These findings suggest that there could be an underlying relationship, possibly a mediating effect, between these two fall predictors. Exploring this further may lead to a better understanding of falls prediction and inform more accurate prevention interventions. Future research should further examine this relationship with respect to falls as an outcome.

Investigating the role of tonic and phasic locus-coeruleus activation in modulating cognition following acute exercise

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Because the locus-coeruleus norepinephrine system is involved in alertness and attention, the emerging perspective is that activation of this system may underlie enhancements in cognition that occur following the cessation of acute bouts of exercise. To date, however, we have little understanding to what extent activity in the locus-coeruleus is modulated following exercise. To this end, the current study utilized pupillometric measures to assess modulations in both tonic (i.e., baseline) and phasic activation (i.e., task-evoked) of the locus-coeruleus in response to a modified flanker task. Pupillometric assessments were performed in a sample of college-aged young adults prior to and following a single bout of moderate intensity aerobic exercise or an active control condition during two separate, counterbalanced sessions. Analysis of behavioral performance replicated the previous acute exercise literature. However, findings revealed no exercise-induced modulations in either baseline pupil size (as an index of tonic locus-coeruleus activation) or task-evoked pupillary reactivity (as an index of phasic locus-coeruleus activation). These findings suggest that activation of the locus-coeruleus does not appear to be modulated following a bout of

acute exercise. Therefore, the locus-coeruleus norepinephrine system may not underlie the cognitive enhancements observed following exercise. Investigating the neurobiological mechanisms underlying exercise-induced enhancements in cognitive function is essential for determining how best to optimize physically active behaviors to maximize the influence on these mechanisms for cognitive health and function.

Exploration into the barriers and facilitators of exercise adherence behaviours in patients with persistent musculoskeletal pain

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Introduction. Persistent musculoskeletal (PMSK) pain is defined as pain of the axial skeleton that persists longer than three months. Sedentary lifestyles and the aging population have resulted in current prevalence rates being on the rise; osteoarthritis and low back pain being two of the most common. Active treatments, such as exercise prescribed by a physiotherapist, have been found to be an effective course of treatment. However, the majority of patients do not adhere to their prescribed exercise. Understanding the barriers and facilitators of the behaviour would provide crucial insight to aid in the development of a behaviour change intervention. However, research is minimal. This study aimed to explore the factors influencing exercise adherence behaviour from both the perspective of PMSK pain patients and those treating them. Methods. 20 semi-structured in-depth interviews were conducted on patients with PMSK conditions (6 low back pain, 4 fibromyalgia, 3 shoulder, 3 hip, 2 osteoarthritis, 2 knee) and 3 focus groups with health professionals in the UK. Topic guides were informed by past literature about adherence to exercise. Data was analysed using framework analysis. Results to date. The Theoretical Domains Framework was utilized to develop the analysis framework. To date, preliminary themes have been identified. Lack of specification of prescription, pain levels, infrequent appointments and past physiotherapy interventions have been identified as areas impacting adherence levels. Conclusions. The TDF has helped elicit a wide range of potential determinants of adherence. Themes and sub-themes will continue to be analysed and organized. Findings will be used to inform further research and in the development of a behaviour change intervention utilizing the intervention mapping protocol.

Cycling as a means of improving inhibitory control and maintaining brain function and academic performance in 9- to 10-year-old children

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Acute aerobic exercise has demonstrated positive effects on inhibitory control in children. However, regarding academic performance and underlying neural mechanisms during and following acute exercise, the evidence is not well established. The aim of the present investigation was to examine the effects of moderate stationary cycling on academic achievement and event-related potentials (ERPs) during an inhibitory control task in 9- to 10-year-old children. Children (n = 34) completed a standardized math and reading test (WRAT3) and a hybrid no-go/flanker task (assess attentional and motor inhibition) on two separate counterbalanced days (i.e., cycling, seated rest). Math and reading were assessed during cycling and seated rest while task performance and the P3 ERP component were assessed during and after both conditions. Although results revealed no change in math and reading during cycling, greater overall no-go/flanker accuracy was observed during and after cycling compared to seated rest. Additionally, a decrease in P3 amplitude was observed during cycling and after seated rest compared to during seated rest, suggesting greater temporal reductions in P3 amplitude across the rest condition compared to the cycling condition. Collectively, results demonstrate improvements in inhibitory control during and after cycling without decrements in neuroelectrical underpinnings of attention and performance on math and reading tests. Together, acute moderate bouts of cycling may be an effective exercise modality for improving aspects of inhibitory control that facilitate behavior in children. Such findings have implications for promoting acute bouts of aerobic physical activity in the classroom by improving behavior without interfering with academic endeavors.

The effects of colors on gaze behavior in soccer penalties

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To date, a copious amount of research - often embedded in the influential color-in-context-theory by Elliott and Maier (2012) - has shown the presence and importance of color-effects in a wide variety of sport contexts, e.g., for soccer penalties (Greenlees, et al., 2013). However, these studies often focus solely on psychological and outcomes parameters, and neglect to investigate the underlying processes, such as changes in (visual) behavior or (physical) performance. Following the soccer penalty setting of Greenlees et al. (2008), this study aimed at examining the effects of colors on gaze behavior and physical performance. Based on an a priori power analysis sample size was set to 30 participants. Participants performed a rating task while wearing an eye tracking system that measured the duration per fixation, total duration of fixations and the total number of fixations. During this task, participants had to rate 40 pairs of soccer goalkeepers displayed side-by-side in differing colors (red, blue, yellow, green, and grey) individually on five criteria (e.g., aggression, speed). Before and after the rating task, each participant performed two maximum wall-sit tasks against a video opponent, displayed wearing either a red or a blue jersey (order counterbalanced). Before the task, the participants had to report their expected wall-sit performance. Results showed no significant color-effect for gaze behavior, F (4, 116) = 0.65, p = .63, partial eta^2 = .02, and maximum wall-sit performance, $t(29)$ = -1.70, p = .10, Cohen's d = 0.31. Furthermore, no differences were observed for either the expected wall-sit performance or the rated criteria. These findings allude that colors do not appear to influence gaze behavior. In addition, this study (using a different task as Dreiskämper et al., 2013, or Briki et al., 2015) was not able to replicate the effects of colors on physiological performance. These results indicate that more research is required to gain insight into the actual underlining mechanisms of colors-effects.

Differential effects of aging and aerobic fitness on memory

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The present study examined the differential effects of aging and fitness on memory. Ninety-five young adults and eighty-one older adults performed the Mnemonic Similarity Task to assess high-interference memory and general recognition memory. Age-related differences in high-interference memory were observed across the lifespan ($p < 0.001$), with performance progressively worsening from young to old. Age-related differences in general recognition memory were not observed between young and older adults ($p = 0.28$). However, a decline in general recognition memory was observed within older adults after the age of 60 ($p = 0.02$). Furthermore, older adults with higher aerobic fitness had better high-interference